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Current Economic Analysis I-14

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service

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INDUSTRIAL FISHERY PRODUCTS

SITUATION AND OUTLOOK

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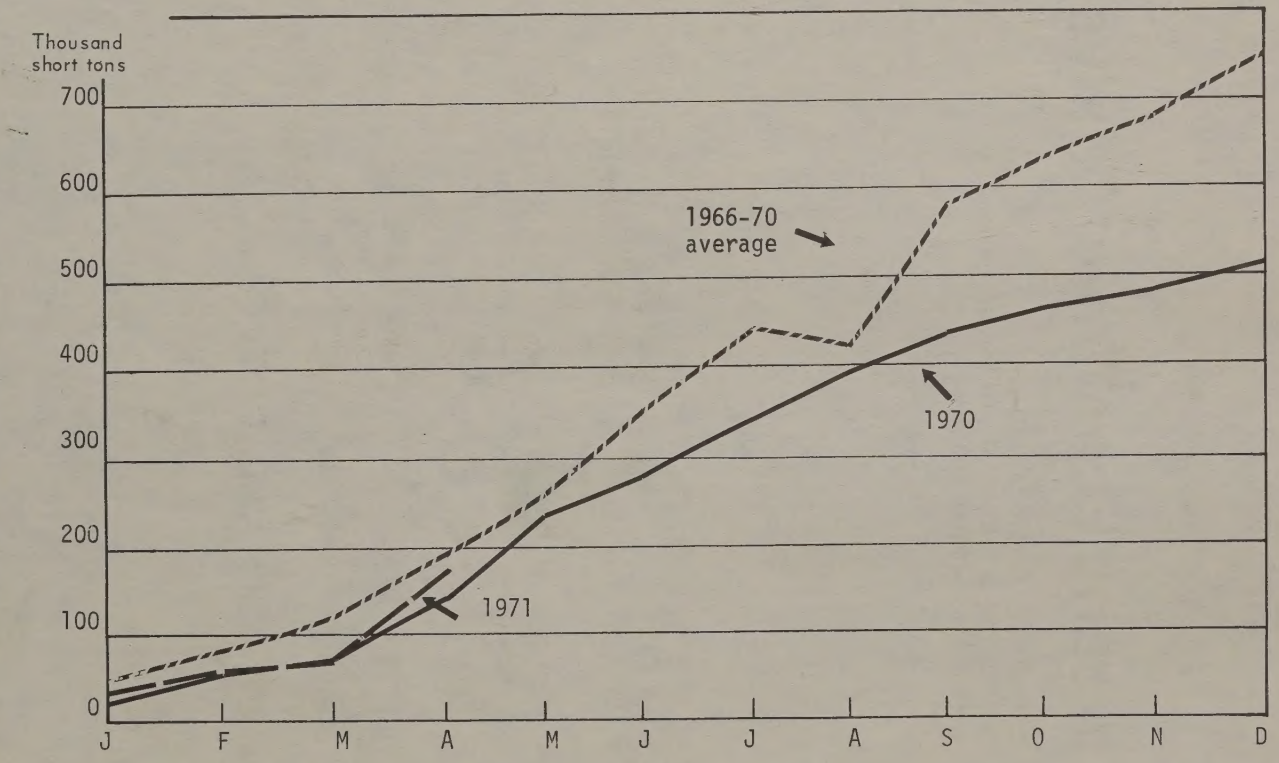
CUMULATIVE SUPPLIES* OF FISH MEAL



*Includes domestic production and imports.

U.S. Department of Commerce Neg. Econ. 516-71(6) National Marine Fisheries Service

Figure 1

INDUSTRIAL FISHERY PRODUCTS

SITUATION AND OUTLOOK

Approved by the

National Marine Fisheries Service
Permanent Review Board

June 16, 1971

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Current Economic
Analysis Division

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SUMMARY

FISH MEAL

The total available quantity of fish meal in the United States during January-April was 118,100 tons 1/—24,000 tons less than a year ago. The decline was mainly due to reduced imports. About 23,900 tons of fish meal were produced in the United States during the first 4 months of 1971. 7,400 tons of this meal was from menhaden. Menhaden meal production was twice as high as a year ago and the highest since 1965.

The member countries of FEO 2/ produced an estimated 780,000 metric tons in January-March 1971—down 220,000 tons from the same period a year ago. Peru produced most of the fish meal—about 502,000 metric tons. FEO countries exported an estimated 456,000 metric tons of fish meal in January-March 1971—compared to 758,000 metric tons last year. Peru's exports were 294,000 metric tons—less than half of the January-March exports a year ago. Stocks increased because FEO exports were less than FEO production. April 1 stocks in FEO countries were an estimated 1.1 million metric tons. Peru held about 850,000 metric tons of these stocks. Peruvian stocks on June 1 were estimated to have increased to one million metric tons.

U.S. broiler placements in January-April were down from the previous year, and the prices of fish meal compared to the prices of other ingredients did not

1/ In general, domestic figures are expressed in short tons and foreign figures in metric tons. Short tons are used in this report, unless otherwise specified. To convert metric tons to short tons, multiply by 1.1023.
2/ Fishmeal Exporters Organization: member countries are Angola, Chile, Iceland, Norway, Peru, and South Africa.

favor the use of fish meal. Because of high stocks in fish meal exporting countries, prices declined during the first 5 months of 1971. The January price for Peruvian fish meal in the United States was $184.10 per ton, f.o.b. East Coast ports. In May, the average price had declined to $169.40. Menhaden meal prices closely followed this price trend.

Although broiler placements will probably continue below last year during the third quarter of 1971, the use of fish meal likely will increase because of lower prices. If fish meal prices average $160 per ton in the third quarter, we estimate that the United States will use about 160,000 tons of fish meal and import about 60,000 tons. At $145 per ton, the use likely would increase to about 220,000 tons and imports to 120,000 tons.

FISH SOLUBLES

Supplies of fish solubles in the United States in January-April 1971 were about 9,500 tons. All solubles came from domestic production. Although the price of menhaden solubles declined during January-May, the price of fish meal declined somewhat faster, thus reducing the price advantage that solubles had last year.

We estimate that about 40,000 tons of fish solubles will be produced in the United States during the third quarter of 1971.

FISH OIL

U.S. production of fish oil in January-April 1971 was about 11.9 million pounds—more than twice the production of the same period a year ago. About 8.3 million pounds were used, and 43.5 million pounds exported—nearly all from the carryover stocks.

The price of fish oil declined in the United States and in Europe during the first 5 months of 1971. In January, the average price of menhaden oil, quoted in New York City, was 10.4 cents per pound and in May, 8.95 cents. The main reason for this price decline was a drop in European consumption of fish oil. The competitive situation of various fats and oils in the world markets suggests, however, that the demand for fish oil may increase enough during the third quarter of this year to absorb the output of that period. Domestic production of fish oil is estimated to be about 90 million pounds during the third quarter of 1971.

FISH MEAL

Review: January-April 1971

Supply

Fish Meal Supplies in January-April—Down From 1970

Total U.S. supplies of fish meal in January-April were 118,100 tons—down 24,000 tons from a year ago and the lowest for this period since 1962 (table 1 and fig. 1). The decline was mainly due to a marked drop in imports, although domestic production of fish meal declined from last year also.

Total Fish Meal Production in January-April—Down From Last Year—Menhaden Up

About 23,900 tons of fish meal were produced in the United States during the first 4 months of 1971 (table 2). Meal produced from tuna and mackerel scrap and anchovy was 12,100 tons—slightly less than last year (table 3). This slight reduction was due to a decline in anchovy landings. Production of menhaden meal was 7,400 tons—more than twice as much as a year ago and the highest since 1965. Nearly all of the menhaden meal was produced in the Gulf Coast area.

Landings during the 1970—71 California anchovy season, which ended May 15, 1971, were about 80,000 tons—compared to 83,500 tons a year before. Anchovy landings were running ahead of the previous season until the end of January. The fishery was temporarily closed during February. When fishing resumed, cold water temperatures and bad weather kept the fish in deep waters, and the landings were very small. The quota for the season was 110,000 tons.

Menhaden landings in April, the first month of the fishing season, were 76.9 million pounds, about 47 million pounds more than a year ago. About 90 percent of the total menhaden catch came from the Gulf Coast area. Preliminary figures indicate that landings in May were greater than a year ago.

Table 1.—Total fish meal available in the United States: production plus imports, by month, 1969—71 1/

Month	1969	1970 2/	1971 2/
	Thousand short tons		
January	30.0	25.0	37.9
February	31.4	27.2	19.0
March	49.9	26.3	17.2
April	72.7	63.5	44.1
May	76.9	62.2	
June	90.0	81.1	
July	77.1	62.0	
August	51.7	50.7	
September	45.2	39.2	
October	38.8	29.8	
November	19.3	18.8	
December	20.4	30.5	
Total 3/	602.5	516.3	

1/ Excludes meal from shellfish.
2/ Preliminary.
3/ Figures may not add to total because of rounding.

Table 2.—U.S. production of fish meal by month, 1969—71 1/

Month	1969	1970 2/	1971 2/
	Thousand short tons		
January	2.8	4.9	4.6
February	3.9	5.8	3.2
March	4.7	6.9	3.9
April	14.7	8.5	12.3
May	31.8	27.5	
June	35.4	47.5	
July	40.2	51.7	
August	33.5	40.4	
September	35.9	28.3	
October	19.1	22.1	
November	12.7	12.8	
December	9.5	8.2	
Total 3/	244.1	264.8	

1/ Excludes meal from shellfish.
2/ Preliminary.
3/ Figures may not add to total because of rounding.

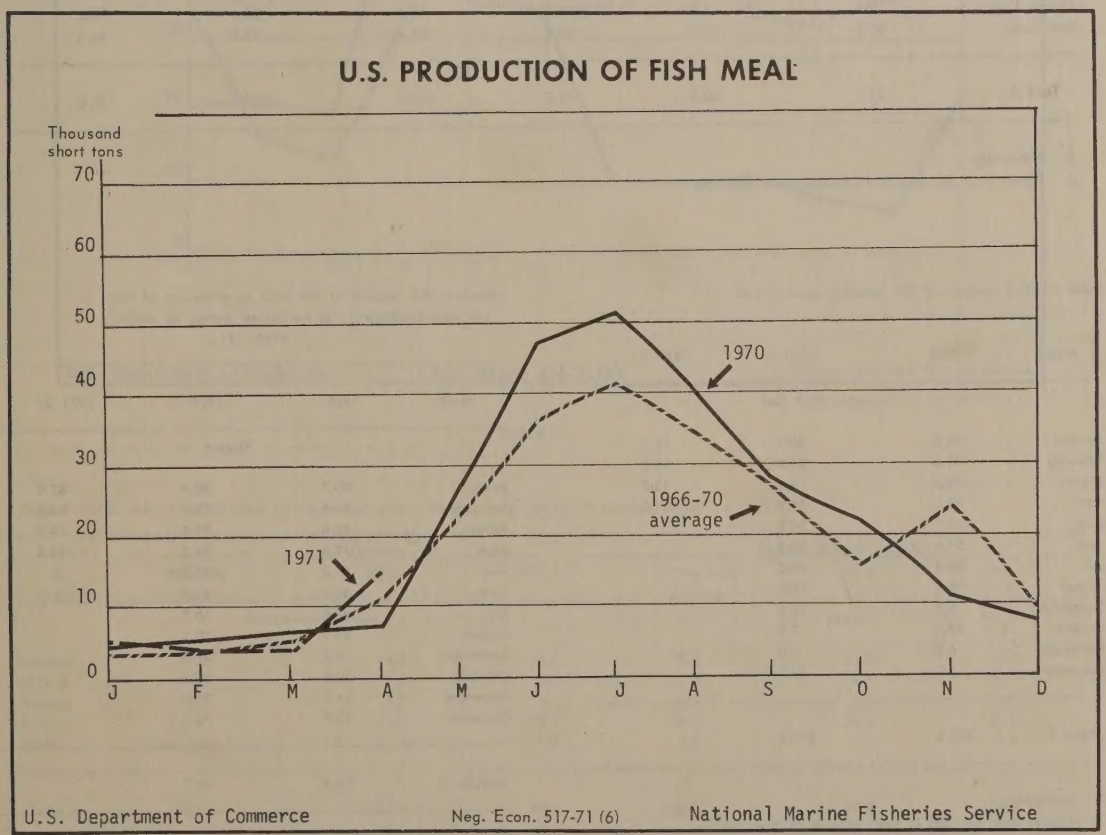


Figure 2.

Table 3.—U.S. production of fish meal by raw material source, January-April, 1966—70 average, 1970, and 1971

Source	Production			Percent of total production		
	1966—70 average	1970 1/	1971 1/	1966—70 average	1970 1/	1971 1/
	Thousand short tons			Percent		
Menhaden 2/	4.3	3.2	7.4	17.8	12.3	31.0
Tuna, mackerel, and anchovy	10.7	12.6	12.1	44.4	48.2	50.6
Unclassified	9.1	10.3	4.4	37.8	39.5	18.4
Total	24.1	26.1	23.9	100.0	100.0	100.0

1/ Preliminary.
2/ Includes a small quantity of fish meal made from other species.

Table 4.—Menhaden landings by area, January-April, 1966—70 average, 1970, and 1971

Area				Percent of total menhaden landings		
	1966—70 average	1970	1971 1/	1966—70 average	1970	1971 1/
	Million pounds			Percent		
Atlantic Coast	7.7	6.2	7.7	18.6	20.5	10.0
Gulf Coast	33.6	24.1	69.3	81.4	79.5	90.0
Total 2/	41.3	30.3	76.9	100.0	100.0	100.0

1/ Preliminary.
2/ Figures may not add to total because of rounding.

Table 5.—U.S. imports of fish meal by month, 1969—71

Month	1969	1970 1/	1971 1/
	Thousand short tons		
January	27.2	20.1	33.3
February	27.6	21.4	15.8
March	45.2	19.4	13.3
April	58.0	54.9	31.8
May	45.1	34.7	
June	53.6	33.5	
July	36.8	10.2	
August	18.3	10.3	
September	9.3	10.9	
October	19.7	7.8	
November	6.6	6.0	
December	11.0	22.3	
Total 2/	358.4	251.5	

1/ Preliminary.
2/ Figures may not add to total because of rounding.

Table 6.—U.S. imports of fish meal as a percent of total fish meal available 1/ in the United States, by month, 1969—71

Month	1969	1970 2/	1971 2/
	Percent		
January	90.7	80.4	87.9
February	87.6	78.7	83.2
March	90.6	73.8	79.2
April	79.8	86.5	73.4
May	58.6	55.8	
June	60.3	41.3	
July	47.8	16.5	
August	35.3	20.3	
September	20.6	27.8	
October	50.8	26.2	
November	34.2	31.9	
December	53.7	73.1	
Average 3/	59.5	48.7	

1/ Production plus imports.
2/ Preliminary.
3/ Weighted average.

Imports of Fish Meal—Lowest for January-April in 9 Years

Imports of fish meal in January-April 1971 were 94,200 tons, nearly one-fifth below the comparable period in 1970, and lowest since 1962 (table 5 and fig. 3). Imports in January were higher than a year ago, but the bearish market and expectations of further price reductions slowed down the imports. Peru continued to be the major source of United States' imports during January-April 1971, although the quantity imported (76,700 tons) dropped from 81,500 tons a year ago (table 7 and fig. 4). There were no imports from Norway, Chile, and South Africa. These countries sent most of their fish meal to Europe.

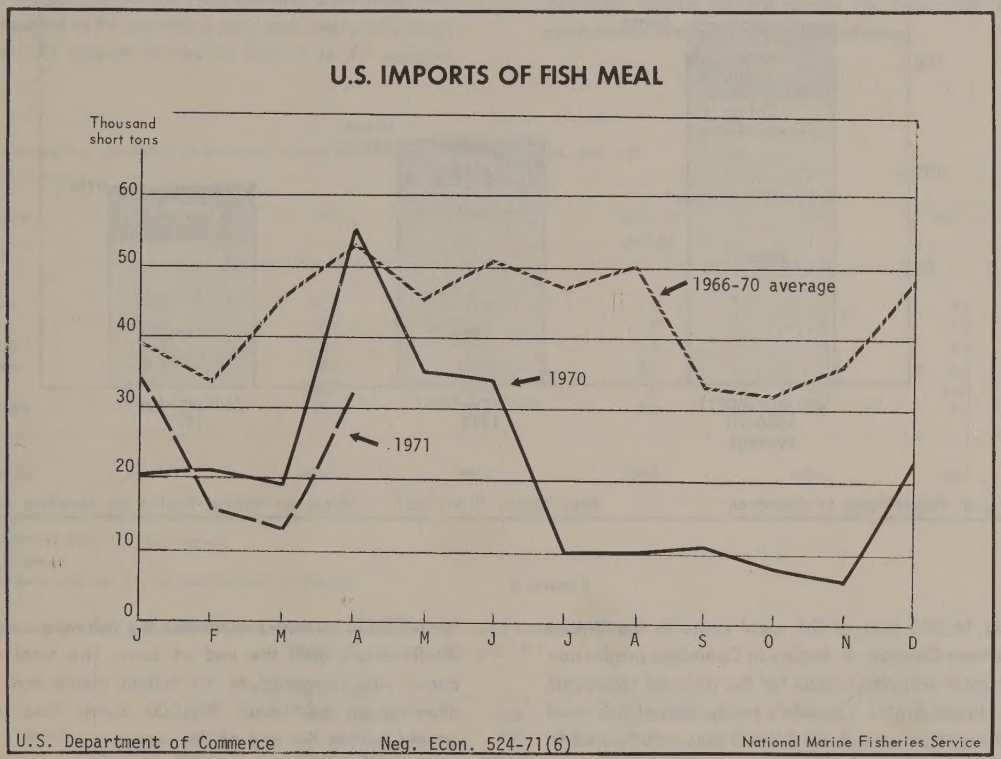


Figure 3

Table 7.—U.S. imports of fish meal by country of origin, January-April, 1966—70 average, 1970, and 1971

Country of Origin	Quantity			Percent of total imports		
	1966—70 average	1970	1971 1/	1966—70 average	1970	1971 1/
	Thousand short tons			Percent		
Canada	17.8	24.7	16.6	10.4	21.3	17.6
Chile	15.8	7.1	—	9.2	6.1	—
Norway	13.0	1.7	—	7.6	1.5	—
Peru	121.1	81.5	76.7	70.9	70.4	81.4
Other	3.3	.8	.9	1.9	.7	1.0
Total 2/	171.0	115.9	94.2	100.0	100.0	100.0

1/ Preliminary.
2/ Figures may not add to total because of rounding.

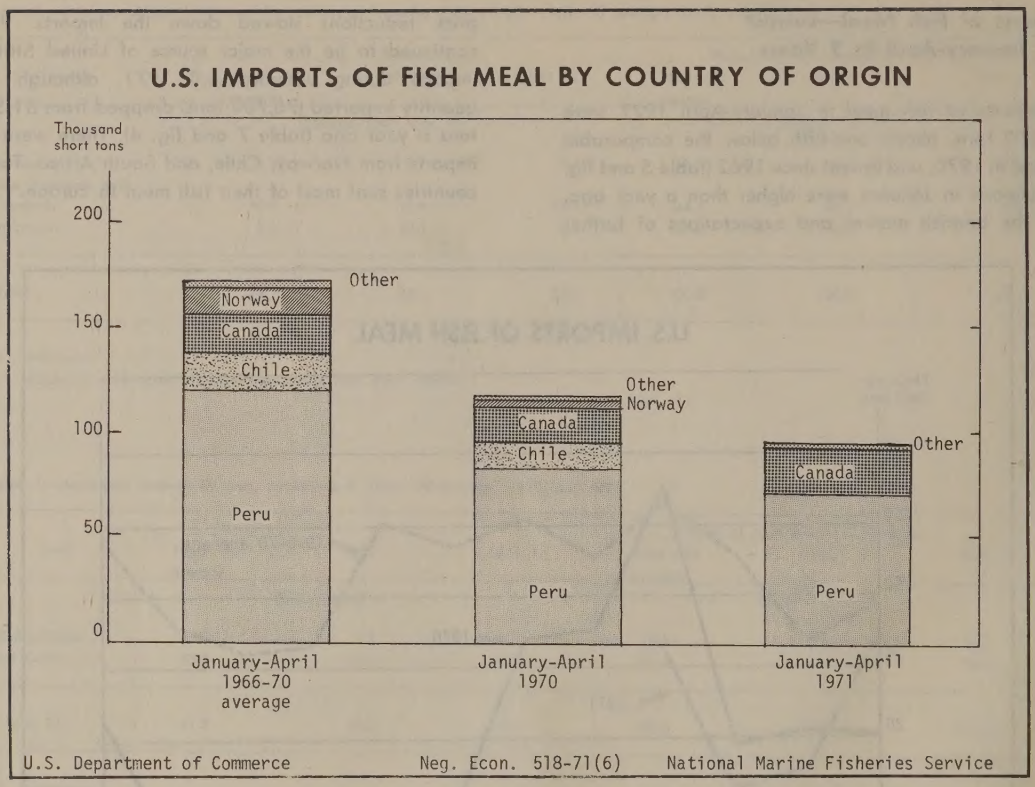


Figure 4

Only 16,600 tons of fish meal came to the United States from Canada. A decline in Canadian production of fish meal was one reason for the reduced shipments to the United States. Canada's production of fish meal in January-April was about 34,400 tons—compared to 46,400 tons a year ago.

FEO Fish Meal Production—Down From 1970

Member countries of the Fishmeal Exporters Organization (FEO) produced an estimated 780,000 metric tons of fish meal in JanuaryMarch 1971—down 220,000 tons from 1970 (table 8). Peru made nearly two-thirds of the FEO fish meal. Peru's production in January-March was, however, less than a year ago because the season was closed in January and February.

The 1970—71 fishing season in Peru began in September. By May 10, the season's catch quota for anchovy, 9.5 million metric tons, was exceeded by nearly 260,000 metric tons and fishing was suspended. Because of the demands of fishermen, however, the Peruvian Government extended the fishing season for small vessels until the end of June. The total catch quota was increased to 10 million metric tons thus allowing an additional 240,000 metric tons to be caught before the end of the season.

Norwegian production of fish meal increased sharply in January-March 1971. It reached 125,000 metric tons —compared to 72,100 metric tons last year.

The catch for reduction in January-March was about 1.2 million metric tons compared to about 800,000 metric tons a year ago. Nearly all of the catch was capelin.

South Africa produced 60,000 metric tons of fish meal in January-March 1971—slightly less than a year ago. The pelagic fishing season for South Africa began on February 16 and will close on August 31. Catch quotas totaled slightly above a million metric tons. This represents approximately 200,000 metric tons of fish meal.

FEO Exports in January-March—Down From 1970

FEO countries exported an estimated 456,000 metric tons of fish meal in January-March 1971—slightly over half of the 758,000 metric tons exported during the same period a year ago (tables 9 and 10). About 63 percent of the FEO exports were from Peru—compared to 81 percent a year ago. Norway's share of the FEO exports increased from 7 to 17 percent.

Peru exported 294,000 metric tons in the first quarter of 1971—less than half of the quantity exported a year before. The following factors caused the sizable drop in exports this year:

1. The high-price policies of the Peruvian Government market company, EPCHAP (Empresa Publica de Comercializacion de Harina y Aceite de Pescado), which caused prices for fish meal to be noncompetitive with other ingredients;

Table 8.—FEO 1/ production of fish meal, January-March, 1966–70 average, 1970, and 1971

Country	1966–70 average	1970	1971 2/	1966–70 average	1970	1971 2/
	Thousand metric tons			Percent of FEO production		
Angola	17.0	21.0	16.6	1.9	2.1	2.1
Chile	61.5	59.1	56.6	7.0	5.9	7.3
Iceland	24.6	30.2	19.7	2.8	3.0	2.5
Norway	73.4	72.1	125.0	8.3	7.2	16.0
Peru	629.7	754.4	502.3	71.1	75.0	64.4
S. Africa	78.5	68.7	60.0	8.9	6.8	7.7
Total 3/	884.7	1,005.4	780.2	100.0	100.0	100.0

1/ Fishmeal Exporters Organization.
2/ Estimated.
3/ Figures may not add to total because of rounding.

Table 9.—Total FEO 1/ exports of fish meal and FEO exports to the United States, by month, 1966–70 average, 1970, and 1971

Month	1966–70 average			1970			1971 2/		
	Total FEO exports	FEO exports to the United States 3/		Total FEO exports	FEO exports to the United States		Total FEO exports	FEO exports to the United States	
	Thousand metric tons		Percent	Thousand metric tons		Percent	Thousand metric tons		Percent
January	217.1	33.5	15.4	212.9	13.5	6.3	150.5	29.6	19.7
February	233.8	28.4	12.1	263.2	14.6	5.5	4/141.2	13.5	9.6
March	244.2	39.7	16.3	281.9	12.3	4.4	4/164.4	7.5	4.6
April	235.5	48.5	20.6	257.0	50.0	19.5			
May	245.5	39.6	16.1	274.6	28.9	10.5			
June	227.7	46.5	20.4	201.9	28.6	14.2			
July	233.8	41.5	17.8	250.8	4.7	1.9			
August	183.3	42.6	23.2	167.7	1.6	1.0			
September	166.9	26.5	15.9	134.1	1.9	1.4			
October	177.1	25.2	14.2	113.5	—	—			
November	202.7	32.1	15.8	162.5	0.2	0.1			
December	229.5	42.3	18.4	194.7	17.7	9.1			
Total 5/	2,597.0	446.4	17.2	2,515.0	174.0	6.9			

1/ Fishmeal Exporters Organization.
2/ Preliminary.
3/ Based on imports of fish meal from FEO countries as reported by the U.S. Department of Commerce, Bureau of the Census.
4/ Estimated.
5/ Figures may not add to total because of rounding.

Table 10.—Total FEO 1/ exports of fish meal and FEO exports to the United States, January-March, 1966—70 average, 1970, and 1971

Country	1966—70 average			1970			1971 2/		
	Total exports	Exports to the United States 3/		Total exports	Exports to the United States 3/		Total exports4/	Exports to the United States 3/	
	Thousand metric tons		Percent	Thousand metric tons		Percent	Thousand metric tons		Percent
Angola	14.9	0.1	0.7	18.6	—	—	10.4	—	—
Chile	38.3	9.7	25.3	23.1	1.1	4.8	48.5	—	—
Iceland	25.6	5/	5/	16.2	5/	5/	18.6	—	—
Norway	85.4	11.0	12.9	51.0	1.7	3.3	76.6	—	—
Peru	482.1	80.7	16.7	611.6	37.5	6.1	293.8	50.7	17.3
South Africa	48.9	.2	5/	37.5	—	—	8.1	—	—
Total 6/	695.1	101.7	14.6	758.1	40.3	5.3	456.1	50.7	11.1

1/ Fishmeal Exporters Organization.
2/ Preliminary.
3/ Based on imports of fish meal as reported by the U.S. Department of Commerce, Bureau of the Census.
4/ Estimated.
5/ Less than .05.
6/ Figures may not add to total because of rounding.

Table 11.—FEO 1/ exports of fish meal, by country of destination, January-March, 1969—71

Country	FEO exports			Percent of total FEO exports		
	1969	1970	1971 2/	1969	1970	1971 2/
	Thousand metric tons			Percent		
EEC						
Belgium	18.2	13.4	7.9	2.5	1.8	1.7
France	19.3	23.2	10.8	2.6	3.1	2.4
Germany, West	131.1	171.7	111.6	17.8	22.6	24.5
Italy	25.4	35.3	18.0	3.4	4.7	3.9
Netherlands	63.0	70.8	20.6	8.5	9.3	4.5
Total 3/	(257.0)	(314.4)	(168.8)	(34.8)	(41.5)	(37.0)
United States 4/	88.8	72.3	25.7	12.0	9.5	5.6
East European Countries						
Bulgaria	—	3.7	6.1	—	.5	1.3
Czechoslovakia	13.7	7.4	19.9	1.9	1.0	4.4
Germany, East	35.0	25.1	22.4	4.7	3.3	4.9
Hungary	12.6	11.5	9.2	1.7	1.5	2.0
Poland	33.1	40.4	27.7	4.5	5.3	6.1
Yugoslavia	20.2	16.7	21.8	2.7	2.2	4.8
Other	2.1	4.4	2.0	.3	.6	.4
Total 3/	(116.7)	(109.3)	(109.1)	(15.8)	(14.4)	(23.9)
Other						
Australia	10.4	5.1	2.8	1.4	.7	.6
Denmark	10.1	5.9	9.0	1.4	.8	2.0
Finland	5.5	6.2	6.9	.7	.8	1.5
Japan	19.2	53.4	1.6	2.6	7.0	.4
Mexico	20.7	27.0	24.9	2.8	3.6	5.5
Portugal	9.1	7.7	1.4	1.2	1.0	.3
Singapore	9.4	6.7	—	1.3	.9	—
Spain	35.0	39.1	16.5	4.7	5.1	3.6
Sweden	15.6	15.6	18.8	2.1	2.1	4.1
United Kingdom	103.6	56.2	34.1	14.1	7.4	7.5
Venezuela	3.4	7.5	6.4	.5	1.0	1.4
Other	33.7	31.8	30.1	4.6	4.2	6.6
Total 3/	(275.7)	(262.1)	(152.5)	(37.4)	(34.6)	(33.5)
Total 3/	738.2	758.1	152.5	100.0	100.0	100.0

1/ Fishmeal Exporters Organization.
2/ Estimated.
3/ Figures may not add to total because of rounding.
4/ Based on export figures reported by the FEO countries.

Table 12.—FEO 1/ fish meal stocks held April 1, 1966–70 average, 1970, and 1971

Country	1966–70 average	1970	1971 2/	1966–70 average	1970	1971 2/
	Thousand metric tons			Percent of total FEO stocks		
Angola	9.1	10.1	10.7	1.3	1.7	1.0
Chile	37.1	38.1	44.3	5.3	6.5	4.0
Iceland	17.5	14.1	2.7	2.5	2.4	0.2
Norway	76.9	55.7	147.6	11.0	9.5	13.4
Peru	521.3	440.2	854.2	74.3	75.1	77.7
South Africa	39.4	28.2	40.2	5.6	4.8	3.7
Total	701.3	586.4	1,099.7	100.0	100.0	100.0

1/ Fishmeal Exporters Organization.
2/ Estimated.

2. Profit margins in broiler feeding in the United States and West Germany were lower this year than a year ago and resulted in a smaller number of broilers on feed.

The reduced exports led to a sharp increase in fish meal stocks in exporting countries, especially in Peru. The burden of high stocks stimulated a strong sales drive by EPCHAP in various countries, especially in countries with centrally planned economies. As a result, Peruvian fish meal exports to Czechoslovakia, Yugoslavia, and Bulgaria increased but shipments to other East European countries declined. The major drop in Peruvian exports took place in Western European countries. Compared to last year, Peruvian exports to West Germany and the Netherlands were down a half and four-fifths, respectively. The United States imported 35 percent more fish meal from Peru in JanuaryMarch this year than a year ago, but imports were down in April.

FEO Stocks on April 1—Almost Double From a Year Ago

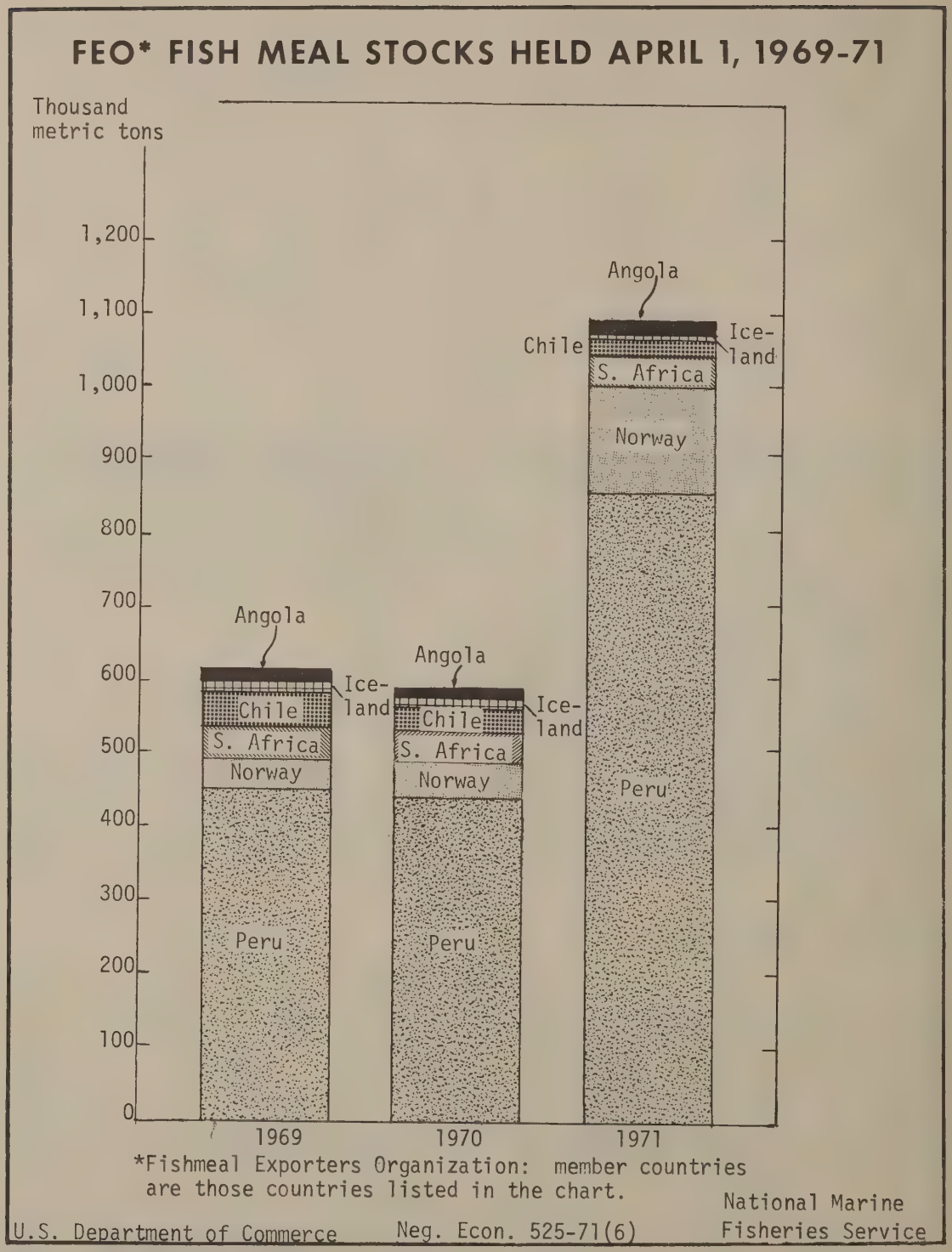
Member countries of FEO held an estimated 1.1 million metric tons of fish meal on April 1, 1971—almost twice as much as a year ago (table 12 and fig. 5). April 1 stocks were about one-third higher than January 1 stocks of this year. The increase is mainly attributed to the increase of fish meal stocks in Peru. Peru held about 850,000 metric tons on April 1 this year compared to 440,000 metric tons a year ago.

The monthly stock-sales ratios of FEO countries in January-April averaged 4.5:1-compared to 2.1:1 for the same period a year ago (table 13). Peru had the average stock-sales ratio of 6.3:1 during JanuaryApril—a considerable increase from the average ratio of 2.1:1 for the same period a year ago. The increase of these ratios reflects the growth of the burden of stocks.

Table 13.—FEO fish meal stock-sales ratios 1/, by month, 1969–71

Month	1969	1970	1971 2/
	Ratio		
January	2.50	2.09	4.62
February	2.08	1.85	3/4.44
March	1.83	1.87	
April	2.13	2.53	
May	1.94	2.72	
June	2.13	3.23	
July	1.65	2.15	
August	1.66	2.38	
September	1.88	3.04	
October	1.72	5.03	
November	1.39	4.22	
December	1.79	3.90	
Average	1.89	2.92	

1/ Stocks are average of beginning and end-of-month sales equal exports plus local consumption.
2/ Preliminary.
3/ Estimated.


FEO* FISH MEAL STOCKS HELD APRIL 1, 1969-71
Thousand metric tons
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
Angola
Chile
Ice-land
S. Africa
Norway
Peru
1969
1970
1971
*Fishmeal Exporters Organization: member countries are those countries listed in the chart.
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National Marine Fisheries Service

Figure 5

Since the first of the year, the Peruvian Government has made efforts to cut the production despite the fact that this action causes a social burden. Regardless of limitations, the anchovy catch was excellent during March and April. As a result, the original catch quota was exceeded already on May 10, and stocks were over one million metric tons. EPCHAP has also reduced the prices of fish meal but not enough to improve the stock situation. The extension of the fishing season, the increase of quota, and a change in EPCHAP management have increased the bearishness of the international market for fish meal.

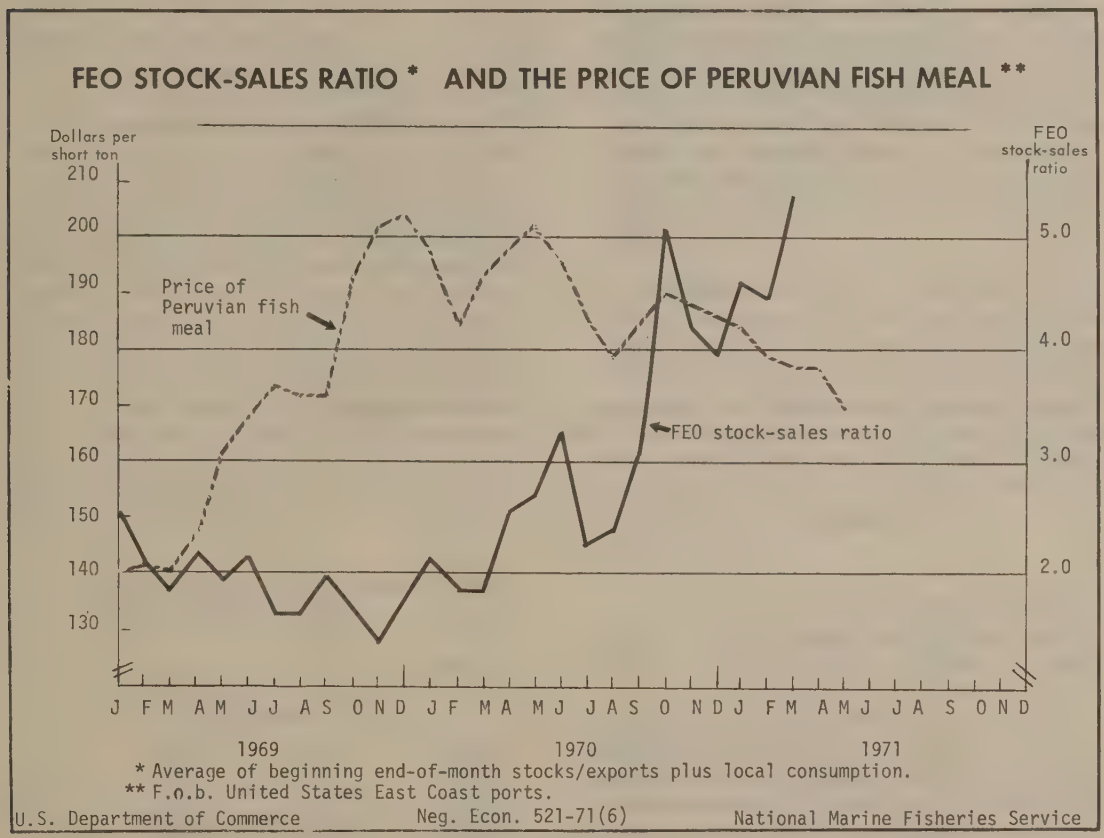

Figure 6

Table 14.—Broiler chick placements in 22 States, and average broiler price at the farm, by month, 1969—71

Month	1969		1970		1971 1/	
	Chicks placed	Broiler price	Chicks placed	Broiler price	Chicks placed	Broiler price
	Million	Cents/lb.	Million	Cents/lb.	Million	Cents/lb.
January	201.2	14.1	288.5	14.8	280.5	13.0
February	211.8	14.9	240.7	14.3	224.7	13.7
March	282.9	15.1	251.4	14.8	236.2	13.7
April	234.0	14.7	257.4	13.7	244.7	13.0
May	295.9	15.5	318.6	13.9		
June	235.3	15.9	252.5	13.3		
July	220.4	17.5	230.6	13.6		
August	265.4	16.5	280.5	13.2		
September	204.5	15.7	198.6	13.4		
October	204.8	14.8	242.9	12.8		
November	270.6	14.4	217.2	12.9		
December	219.4	13.6	221.9	11.8		
Total placements 2/ and average price 3/	2,846.2	15.2	3,000.9	13.5		

1/ Preliminary.
2/ Figures may not add to total because of rounding.
3/ Weighted average.

Sources: Commercial Broilers:Annual Production and Weekly Placements, U.S. Department of Agriculture, Statistical Reporting Service, and Poultry and Egg Situation , U.S. Department of Agriculture, Economic Research Service.

Demand

Broiler Chick Placements in January-April—Down Slightly From a Year Ago

Nearly one billion broiler chicks were placed on farms in the leading broiler-producing States during the first 4 months of 1971—slightly less than the number placed during the same period last year (table 14). Two reasons for lower placements were the lower price of broilers and the increased cost of feed. Prices paid for broilers in the first 4 months of 1971 were 0.6 to 1.8 cents below the prices a year ago. The April average price for broilers was 13 cents per pound.

The decrease in placements of broiler chicks is only partially responsible for the low use of fish meal during the first 4 months of 1971. Relatively high prices for fish meal and high ratios between the price of fish meal and the prices of competing feed ingredients were the major causes for lower production of fish meal.

Our calculations of least-cost formulas for broiler feed indicated that broiler feed rations during the first quarter of 1971 should contain only about 2 percent fish meal. These calculations do not necessarily mean that this percentage of fish meal was used in the broiler

Table 15.—Average monthly price of soybean meal 1/ at Decatur, Ill., 1969—71

Month	1969	1970	1971
	Dollars per short ton		
January	79.50	97.60	86.10
February	78.40	95.60	82.40
March	80.10	79.60	82.00
April	81.30	83.10	80.50
May	84.90	78.90	84.80
June	88.20	82.70	
July	86.20	92.50	
August	84.10	92.50	
September	82.70	88.20	
October	82.10	83.80	
November	76.90	82.50	
December	90.40	88.20	
Average 2/	82.90	87.10	

1/ 50 percent protein, bulk.
2/ Simple average.

Source: Feed Market News, U.S. Department of Agriculture, Consumer and Marketing Service, Grain Division.

feed ration, because feed mixers do not always have the same prices or they have special preferences. The availability of various ingredients also influences the contents of broiler rations. These calculations support the findings that fish meal in broiler feed rations is at a price disadvantage in comparison with other feed ingredients, especially soybean meal.

Soybean Meal Price Declined $7.70 in Four Months

The average price of soybean meal declined steadily from December 1970 to April this year. The April average price (50 percent solvent) at Decatur, Ill., was $80.50 per ton (table 15). This price was $7.70 per ton less than in December. Prices of fish meal declined from December to April, but they declined at a lower rate than prices of soybean meal. Thus, the ratio between the price of fish meal and the price of soybean meal increased from 2.11:1 in December to 2.20:1 in April, worsening the competitive position of fish meal. Because of the increased prices of soybean meal in May, however, the ratio improved to 2.00:1. March, April, and May ratios indicate a slight improvement in the competitive position of fish meal when compared to the same months a year ago.

Table 16.—Ratio of Peruvian fish meal price 1/ to soybean meal price 2/, by month, 1969—71

Month	1969	1970	1971
	Price ratio		
January	1.75	2.02	2.14
February	1.80	1.92	2.17
March	1.75	2.42	2.16
April	1.80	2.38	2.20
May	1.90	2.56	2.00
June	1.90	2.37	
July	2.01	2.01	
August	2.05	1.94	
September	2.08	2.09	
October	2.36	2.26	
November	2.63	2.28	
December	2.26	2.11	
Average	1.89	2.24	

1/ F.o.b. East Coast ports, 65 percent protein, as quoted at New York City.
2/ Wholesale at Decatur, Ill., 50 percent protein, bulk.

Prices

Fish Meal Prices—Declining

Average monthly prices of fish meal declined steadily from January to May. Menhaden meal prices, as quoted by brokers in New York City, declined from the January average of $186.50 per ton, f.o.b. East Coast and Gulf points to $169.20 in May—a drop of $17.30 per ton (table 17 and fig. 7). Prices of Peruvian meal declined during the same period by $14.70 per ton. The May average quotation was $169.40 per ton, f.o.b. East Coast ports. Prices of tuna and mackerel meal held steady from January to April but declined in May.

Wholesale prices for Peruvian fish meal in Hamburg, West Germany, declined during the first 5 months somewhat faster than the United States prices (table 20 and fig. 8). The market for fish meal in Hamburg was not active at the beginning of May mainly because of the currency turmoil in West Germany. In response to the increased bearishness of the market, the market for fish meal continued to be weak during the rest of the month. Prices of Peruvian meal were still too high to stimulate sales.

Table 17.—Average monthly price of menhaden meal 1/ f.o.b. East Coast and Gulf points, 1969—71

Month	1969	1970	1971 2/
	Dollars per short ton		
January	149.25	195.90	4/186.50
February	153.00	196.50	4/184.20
March	153.00	189.90	180.00
April	3/154.00	197.50	174.10
May	174.00	197.50	169.20
June	172.60	193.80	
July	171.90	179.00	
August	168.90	172.90	
September	171.60	177.80	
October	189.30	187.50	
November	200.10	189.10	
December	199.25	187.50	
Average 5/	174.30	184.80	

1/ 60 percent protein, bagged, as quoted by brokers at New York City.
2/ Bulk.
3/ Nominal price as presented in the Oil, Paint, and Drug Reporter
4/ Mainly meal at Gulf points.
5/ Average weighted by monthly production of menhaden meal.

Table 18.—Average monthly price of tuna and mackerel meal 1/ at Los Angeles, 1969–71

Month	1969	1970	1971 2/
	— — — Dollars per short ton — — —		
January	132.60	172.50	150.00
February	135.00	172.50	150.00
March	133.80	177.00	150.00
April	127.80	178.50	150.00
May	138.60	180.00	147.60
June	145.80	180.00	
July	147.00	180.00	
August	147.00	168.00	
September	150.00	165.00	
October	168.00	162.00	
November	177.00	161.00	
December	172.20	159.00	
Average 3/	146.15	170.15	

1/ 60 percent protein, bagged, as quoted by brokers at Los Angeles.
2/ Bulk.
3/ Average weighted by monthly production.

Table 19.—Average monthly price of Peruvian fish meal 1/ f.o.b. East Coast ports, 1969–71

Month	1969 2/	1970 3/	1971 4/
	— — — Dollars per short ton — — —		
January	139.50	197.50	184.10
February	141.00	183.50	178.90
March	140.50	192.70	177.30
April	146.80	198.00	177.00
May	161.00	202.10	169.40
June	168.00	195.80	
July	173.50	185.90	
August	172.10	179.10	
September	172.00	184.00	
October	193.40	189.80	
November	202.40	187.80	
December	204.00	186.40	
Average 5/	157.10	194.70	

1/ 65 percent protein, f.o.b. East Coast ports.
2/ Bagged.
3/ January through March bagged, April bulk, May through July bulk and bagged, August through December bulk.
4/ Bulk.
5/ Average weighted by monthly imports of Peruvian fish meal.

Although the price decrease depends on the decision of EPCHAP, various factors tend to influence decisionmaking. The decrease of prices during the first 5 months of the year was caused mainly by the high stocks of fish meal in Peru. Expectations for further price reductions have kept the purchases of importers and feed mixers at the minimum.

Table 20.—Prices of Peruvian fish meal in the United States and in Europe, by week, 1971

Beginning date of the week	United States f.o.b. East Coast and Gulf ports 1/	Hamburg wholesale price 2/
	— — — Dollars per short ton — — —	
January 4	186.0	192.5
" 11	183.5	188.5
" 18	185.0	188.5
" 25	182.5	188.5
February 1	182.0	188.5
" 8	182.0	186.5
" 15	181.0	186.5
" 22	178.0	186.5
March 1	177.3	184.0
" 8	178.5	182.0
" 15	179.0	182.0
" 22	178.0	177.0
" 29	178.0	174.0
April 5	178.0	172.0
" 12	178.0	167.0
" 19	177.0	167.0
" 26	175.5	171.0
May 3	173.0	168.5
" 10	169.0	170.0
" 17	169.0	172.0
" 24	166.0	167.0
" 31	160.0	166.5
June 7	160.0	163.0

1/ As quoted by brokers in New York City.
2/ Converted from DM per 100 kilograms; concurrent rate of exchange was used.

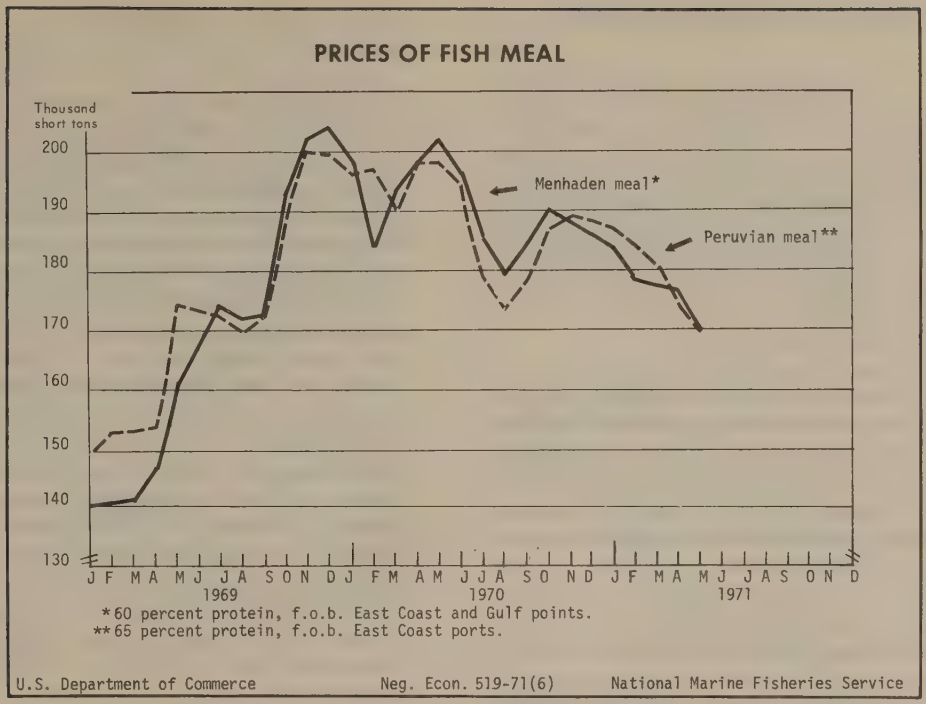
PRICES OF FISH MEAL
Thousand short tons
200
190
180
170
160
150
140
130
Menhaden meal*
Peruvian meal**
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1969
1970
1971
*60 percent protein, f.o.b. East Coast and Gulf points.
**65 percent protein, f.o.b. East Coast ports.
U.S. Department of Commerce
Neg. Econ. 519-71(6)
National Marine Fisheries Service

Figure 7

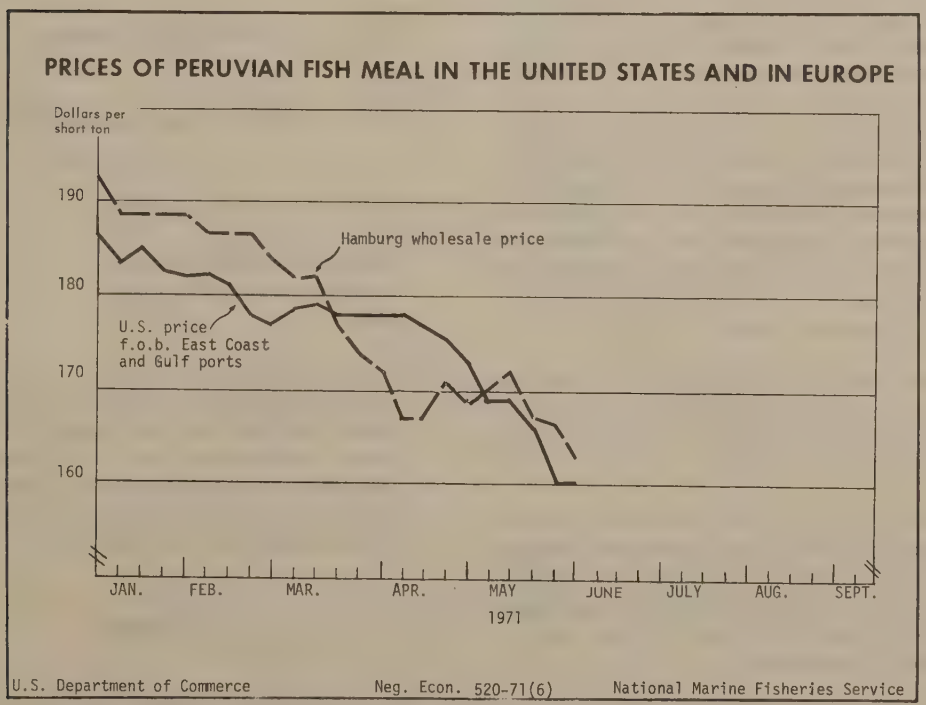

Figure 8

Outlook: July-September 1971

Supply

We estimate that about 100,000 tons of fish meal will be produced in the United States during July-September 1971. About 75 to 80 percent of this production is expected to come from menhaden. Last year's third quarter production of fish meal was 120,500 tons—highest since 1962.

High stocks in Peru and in other fish meal producing countries have created a clearly bearish situation in the world market for fish meal. The price of fish meal, however, will continue to depend on the policies of EPCHAP. The price level at the end of May, although considerably reduced during the last few months, does not appear to be sufficiently low to bring Peruvian stocks down to a more normal level when fishing resumes on September 1. The known sales for shipments for the rest of the year are about 250,000 metric tons; most of it to West Germany. On June 17, Peru signed a contract with the Peoples' Republic of China for delivery of 150,000 to 200,000 metric tons of fish meal. Apparently, most of the meal will be shipped during the next fishing season which begins September 1. Cuba purchased 100,000 metric tons of fish meal from Peru on June 11.

The prices of fish meal in futures markets indicate sellers' and buyers' expectations. For example, the sellers' closing offer on May 3 in the New York Produce Exchange was $181 per metric ton, c.i.f. Hamburg, for August delivery. On May 27, the offer had dropped to $177 per metric ton. The interest in buying at that price was, however, very low, and no contracts for August delivery were made in May.

On the other hand, U.S. soybean stocks are low. With prospects of tightening supplies, the price of soybean meal may increase and create a more favorable market for fish meal.

If the third quarter price of fish meal averages about $160 per ton f.o.b. East and Gulf Coast ports, we estimate that 60,000 tons will be imported—compared to 31,400 tons during the same period a year ago. If the price declines to $145 per ton, imports are likely to double to 120,000 tons.

Demand

An estimated 690 million broilers will be placed on feed in the 22 major broiler-producing States during the third quarter of 1971—about 3 percent below a year ago. Although the number of broilers determines the total feed consumption, the primary influence on the quantity of fish meal used is the price of fish meal in relation to the price of competing feed ingredients. Our calculations indicate that a least-cost broiler ration would contain about 4 percent fish meal if prices of fish meal average about $160 per ton during the third quarter and the prices of the competing feed ingredients continue about the same as in the middle of May. Since the total feed consumption per 1,000 broilers is about 4.14 tons, the use of fish meal in broiler rations would total 114,000 tons. Because about 30 percent of fish meal in the United States is used for purposes other than broiler feed, the total use of fish meal during the third quarter of 1971 is estimated to be about 160,000 tons. Our calculations suggest that a price of $145 per ton would bring the U.S. consumption close to 220,000 tons during the third quarter of 1971.

FISH SOLUBLES

Review: January-April 1971

Supply

Production of Fish Solubles in January-April—Up From 1970

The production of fish solubles in the United States in January-April this year was about 9,500 tons—up nearly 1,000 tons from the previous year. No fish solubles were imported during the first 4 months of this year. About one-fourth of the solubles were made from menhaden, and almost all of the menhaden solubles were produced in the Gulf Coast area.

Demand

Prices of menhaden solubles declined from $51.25 per ton, f.o.b. East Coast plants in January, to $48.90

per ton in May (table 22 and fig. 9). The declining prices and a lack of imports indicated a relatively weak demand for solubles in the United States. Because of the continued favorable relation between the prices of fish solubles and fish meal, a few months ago some feed mixers planned to obtain equipment for the utilization of fish solubles. The declining prices of fish meal made the prospects for continuous advantage in the price of solubles uncertain, and the investment in the necessary equipment appeared less profitable. The execution of these plans apparently has been postponed or dropped.

Outlook: July-September 1971

Based on production during the first 4 months, we estimate that about 40,000 tons of fish solubles will be made during the third quarter of 1971. Most of this production will be from menhaden. The lower prices of fish meal suggest that the demand for fish solubles may weaken during the third quarter of 1971.

Table 21.—Total fish solubles available in the United States: production plus imports, by month, 1969—71

Month	1969	1970 1/	1971 1/
	— — — Thousand short tons — — —		
January	0.6	1.3	1.3
February	1.4	2.1	1.3
March	1.6	2.5	1.6
April	5.0	3.1	5.3
May	11.3	10.0	
June	12.6	16.2	
July	11.7	19.1	
August	10.5	14.3	
September	12.8	11.7	
October	6.5	10.0	
November	4.0	4.5	
December	3.9	2.9	
Total 2/	81.9	97.6	

1/ Preliminary.
2/ Figures may not add to total because of rounding.

Table 22.—Average monthly price of menhaden solubles 1/ f.o.b. East Coast plants, 1969—71

Month	1969	1970	1971
	— — — Dollars per short ton — — —		
January	51.25	51.25	51.25
February	51.25	50.90	51.25
March	49.40	51.75	51.25
April	47.75	52.80	50.60
May	47.50	2/54.70	48.90
June	49.75	2/54.30	
July	51.25	51.90	
August	49.40	50.45	
September	48.75	48.70	
October	50.60	50.60	
November	51.25	50.65	
December	52.50	49.70	
Average 3/	49.60	51.90	

1/ In tank cars; prices quoted by brokers at New York City.
2/ F.o.b. Gulf Coast plants only.
3/ Weighted average.

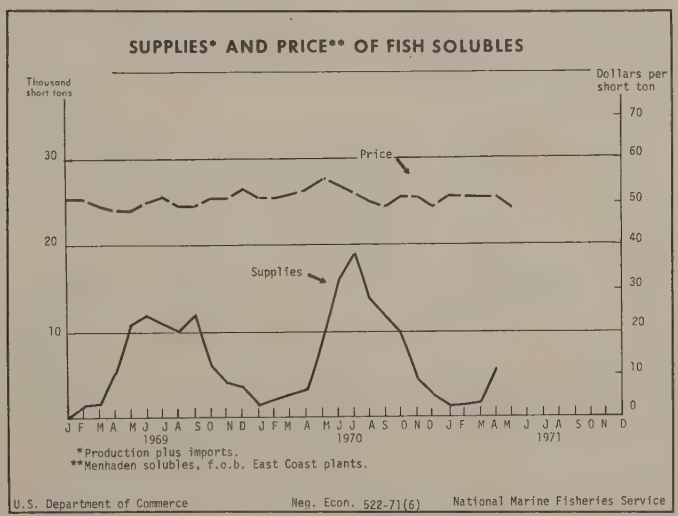

Figure 9

FISH OIL

Review: January-April 1971

Supply

Fish Oil Production—More Than Double Last Year

The domestic industry produced 11.9 million pounds of fish oil in January-April 1971—more than twice the production of the same period a year ago (tables 23 and 24). Menhaden oil production season began in April. About 8.7 million pounds of menhaden oil was produced in that month—about 3.5 times the production of a year ago. About 2.2 million pounds of fish oil were made from anchovy and scraps of tuna and mackerel during the first 4 months of 1971—nearly twice as much as a year before. The production of oil in the unclassified category decreased mainly because production of oil from groundfish and herring declined.

Demand

U.S. Use of Fish Oil—Down From 1970

About 8.3 million pounds of fish oil were used in the United States during January-April 1971—nearly 3 million pounds less than during the same period last year (table 25). The relatively high price of fish oil was probably the main reason for the low utilization.

Exports of Fish Oil—Up From a Year Ago

The United States exported 43.5 million pounds of fish oil in January-April 1971—13.8 million pounds more than a year ago. Most of the oil was exported in January. Because of seasonally low production, exports came primarily from the carryover stocks. About 41.6 million pounds were shipped to the Netherlands—nearly six times as much as a year ago. West Germany and Canada each received about half a million pounds.

Table 23.—U.S. production of fish oil 1/ by month, 1969–71

Month	1969	1970 2/	1971 2/
	Million pounds		
January	0.6	0.6	1.4
February	.6	.6	.5
March	.6	.6	.5
April	5.9	2.9	9.5
May	20.6	21.7	
June	27.7	38.3	
July	29.8	39.9	
August	26.6	39.2	
September	28.7	23.7	
October	13.6	16.8	
November	8.4	6.4	
December	5.0	3.0	
Total 3/	168.0	193.7	

1/ Excluding a small amount of whale and sperm oil.
2/ Preliminary.
3/ Figures may not add to total because of rounding.

Table 24.—U.S. fish oil 1/ production by raw material source, January-April, 1966–70 average, 1970, and 1971

Source	1966–70 average	1970	1971 2/	Percent of total U.S. production: 1966–70 average	1970	1971 2/
	Million pounds			Percent		
Menhaden	3.2	2.5	8.7	52.5	51.0	73.1
Tuna, mackerel, and anchovy	1.3	1.2	2.2	21.3	24.5	18.4
Unclassified	1.6	1.2	.9	26.2	24.5	7.5
Total 3/	6.1	4.8	11.9	100.0	100.0	100.0

1/ Excluding whale oil.
2/ Preliminary.
3/ Figures may not add to total because of rounding.

Fish Oil Prices—Declining

The average monthly price of menhaden oil as quoted at New York City declined steadily from 10.4 cents per pound in January to 8.95 cents in May (table 28 and fig. 10). The average monthly price of tuna and mackerel oil held at 6 cents per pound from January through April but declined slightly in May. Prices of tuna and mackerel oil are less influenced by the European market than the prices of menhaden oil.

During the first 4 months of this year, prices of fish oil in Europe declined faster than the prices of menhaden oil in the United States. The main reasons for this decline were a drop in consumption for fish oil in Europe and an increase in production of Norwegian and Peruvian fish oil. These factors resulted in a notable increase in Peruvian stocks of fish oil.

Table 25.—Industrial use of fish oil in the United States by month, 1969—71 1/

Month	1969	1970 2/	1971 2/
	Million pounds		
January	1.8	3.1	2.2
February	3.1	2.9	2.1
March	3.1	2.4	2.0
April	3.2	2.8	2.0
May	1.9	3.2	
June	3.9	3.2	
July	2.2	2.7	
August	2.5	2.0	
September	3.3	2.8	
October	3.0	2.4	
November	3.3	1.9	
December	2.8	2.0	
Total 3/	34.1	31.4	

1/ Includes marine mammal oil other than sperm oil and some hydrogenated fats (vegetable and animal) and other fats and oils in process.
2/ Preliminary.
3/ Figures may not add to total because of rounding.

Table 26.—U.S. exports of fish oil 1/ by month, 1969—71

Month	1969	1970	1971 2/
	Million pounds		
January	4.0	11.1	32.2
February	8.9	.4	4.9
March	19.8	13.9	.2
April	21.1	4.3	6.1
May	8.8	4.4	
June	15.5	2.4	
July	19.3	30.3	
August	24.7	31.1	
September	7.9	37.8	
October	5.7	.2	
November	33.3	17.9	
December	27.0	4.9	
Total 3/	196.1	158.8	

1/ Excluding whale oil.
2/ Preliminary.
3/ Figures may not add to total because of rounding.

Table 27.—U.S. exports of fish oil 1/ by country of destination, January-April, 1966—70 average, 1970, and 1971

Country	1966—70 average	1970	1971 2/	1966—70 average	1970	1971 2/
	Million pounds			Percent of total U.S. exports		
Canada	0.5	0.1	0.5	1.7	0.3	1.1
Netherlands	11.0	7.1	41.6	37.2	23.8	95.7
Norway	—	—	—	—	—	—
Sweden	9.9	9.3	3/	33.4	31.2	3/
United Kingdom	1.8	1.5	3/	6.1	5.1	3/
West Germany	3.1	3.0	.5	10.5	10.1	1.1
Other	3.3	8.8	.9	11.1	29.5	2.1
Total 4/	29.6	29.7	43.5	100.0	100.0	100.0

1/ Excluding whale oil.
2/ Preliminary.
3/ Less than 0.05.
4/ Figures may not add to total because of rounding.

Table 28.—Average monthly price of menhaden oil 1/ f.o.b. East Coast plants, 1969—71

Month	1969	1970	1971
	Cents per pound		
January	4.70	8.75	10.40
February	5.00	2/9.25	10.30
March	5.20	3/8.90	10.20
April	5.30	3/9.70	9.65
May	5.25	3/10.30	8.95
June	5.20	10.30	
July	5.25	10.40	
August	5.65	10.20	
September	6.10	9.70	
October	6.75	9.75	
November	8.20	10.10	
December	8.50	10.60	
Average 4/	5.75	10.15	

1/ Crude oil in tank cars; prices quoted by brokers at New York City.
2/ Asking price.
3/ F.o.b. Gulf Coast plants.
4/ Weighted average.

Table 29.—Average monthly price of tuna and mackerel oil 1/ at Los Angeles, 1969—71

Month	1969	1970	1971
	Cents per pound		
January	3.25	3.25	6.00
February	3.10	3.50	6.00
March	3.00	3.65	6.00
April	3.00	4.10	6.00
May	3.00	4.70	5.90
June	3.00	4.75	
July	3.00	4.75	
August	3.10	4.95	
September	3.25	5.25	
October	3.25	5.25	
November	3.00	5.50	
December	3.00	6.00	
Average 2/	3.10	4.95	

1/ Crude oil, f.o.b. plant; prices quoted by brokers at Los Angeles.
2/ Weighted average.

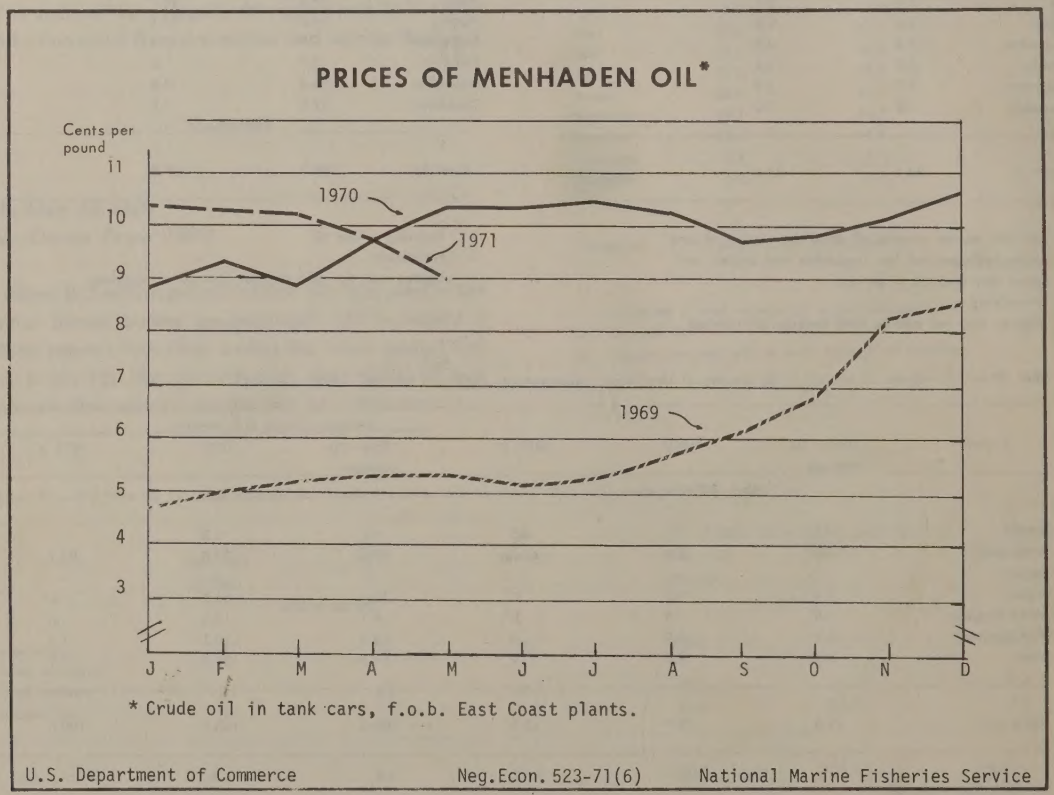

Figure 10

Outlook: July-September 1971

Supply

Because we expect landings to be slightly lower during the third quarter of this year than a year ago, we estimate that the domestic production of fish oil will be about 90 million pounds during the July-September period. Most of this production will come from menhaden. U.S. production of fish oil in the third quarter of 1970 was 103 million pounds—highest since 1962.

Demand

The domestic use of fish oil may increase slightly from a year ago because of the declining price. We estimate that about 8 million pounds will be used in the United States during the third quarter of 1971.

Exports of fish oil will depend on the competitive situation in the world market for fats and oils. The price of fish oil, as well as palm and lauric oils, has declined during recent months. On the other hand, prices of more expensive competing oils, such as soybean oil, have continued at relatively high levels. The resultant wide differences in price are not expected to continue because of some substitutability between oils.

Stocks of soybean oil in the United States are low, and the increase in soybean planting is relatively small. Prices of soybeans are high. These factors suggest that prices of soybean oil may continue high. The strong demand in relation to supplies seems to continue for sunflower and peanut oils, although favorable crop prospects may weaken their prices. Nevertheless, these factors indicate that the demand and prices for fish oil may increase again. Although high stocks of fish oil in Peru will tend to have a bearish affect on the market, we believe that the world demand for fats and oils will increase enough to absorb the output of the third quarter. We expect a reasonably good export market for menhaden oil for the third quarter.

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